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ABSTRACT

A public forum held by the South Carolina Council on Vocational and Technical Education yielded information about the present and future needs of business and industry and how these groups perceive the role of secondary and postsecondary vocational education in today's society. The information elicited at the conference was summarized as follows: (1) a number of South Carolina districts are developing "tech prep" programs--100 percent participation in such programs is recommended; (2) too few South Carolina students receive career counseling--a "career evening" for students and parents is recommended; (3) too few employees demonstrate work ethics--instruction in work ethics and attitudes should be incorporated into the education process; (4) the value of all work should be emphasized; (5) industries complain that workers lack basic skills--all students should master basic skills and vocational or technical students should demonstrate such mastery before entering their programs; (6) the council recommends the development and implementation of apprenticeship programs; (7) all students should master some technical skills and receive early career education; (8) school districts should establish partnerships with local businesses and industry; (9) vocational education and academic education programs should be more integrated; and (10) employees should be trainable at all stages of their career--"tech prep" promises to improve the caliber of employees. (A list of council members and officers and a glossary of 28 terms are included in the report.) (KC)

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REPORT
of a
BUSINESS-INDUSTRY FORUM

of March 26, 1992

Produced and Published by
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THE PURPOSE OF THE BUSINESS AND INDUSTRY FORUM

The Carl D. Perkins Vocational and Applied Technology Education Act of 1990 charges the State Council with responsibility to "...advise the State board and make reports to the Governor, the business community, and general public of the State, concerning ... policies the State should pursue to strengthen vocational education (with particular attention to programs for the handicapped); and initiatives and methods the private sector could undertake to assist in the modernization of vocational education programs." In addition, the State Council will "submit recommendations to the State board on the conduct of vocational education programs conducted in the State which emphasize the use of business concerns and labor organizations and recommend procedures to the State board to ensure and enhance the participation of the public in the provision of vocational education at the local level within the State, particularly the participation of local employers and local labor organizations." To fulfill these requirements, the State Council organized and conducted the Business and Industry Forum on March 26, 1992, at the Sheraton Hotel in Columbia, South Carolina. The Forum was held to solicit public input on vocational and technical education, and yielded information about the present and future needs of business and industry and how these particular groups perceive the role of secondary and post secondary vocational education in today's society.

This Forum was patterned after the successful 1990 Forum in which an invited panel of business and industry representatives, lead by a moderator, discussed vocational and technical education issues. The Forum was divided into morning and afternoon sessions, with an opportunity provided during the afternoon for audience members to comment on the issues presented.

It should be noted that the invited panel members represent the major business and industry sectors of South Carolina; however, their individual comments only reflect their perspective for their particular geographic area of the state. Conditions or practices in one area of the state may not be assumed to prevail at other locations.

The information presented in the body of this report was taken from a transcription of the tape-recorded proceedings. It has been summarized and organized according to topic areas. Conclusions shared by panel members are summarized as Consensus Findings at the end of each topic section. The typewritten transcript and tapes of the Forum are available for review at the State Council office located at 2221 Devine Street, Suite 420, Columbia, South Carolina.

RECOMMENDATIONS OF THE STATE COUNCIL DERIVED FROM THE BUSINESS-INDUSTRY FORUM

TECH PREP

A number of South Carolina districts have forged ahead with developing and implementing tech prep programs. In fact, one of the state's sixteen tech prep consortia is recognized nationally as a leader in tech prep. **The Council commends the cooperation between the technical college system and secondary education in directing their Federal funding toward the development of tech prep; however, the Council recommends that the level of participation of school districts in tech prep initiatives be 100 percent statewide.** No student should be denied the opportunity of choice because the school district in which he/she resides has not implemented a tech prep program of study. Applied academic courses are valuable stepping stones for a student's continuing education and training, either at a post secondary institution or on the job.

CAREER EDUCATION

Too few South Carolina students are receiving career counseling early in their education experiences. **The Council recommends that middle school students receive more exposure to the great variety of career choices available which do not necessarily require a four-year degree.** Career days are informative and fun opportunities for students to learn about professions, but they do not always provide a broad enough range of career options, particularly in the technical or vocational fields. One way of introducing the new opportunities in vocational and technical occupations would be to sponsor a career evening when both the student and his parents could come together to the school. Once there, they can be re-educated about vocational education, and the new tech prep programs can be explained. Through demonstrations by different program instructors and representatives from South Carolina industries, they can see first-hand the kinds of skills and academic competencies needed in a high technology environment. Not only would this be beneficial to students, but it would give schools and business yet another opportunity to work together to improve the quality of vocational and technical education within the state.

WORK ETHICS

Too few employees demonstrate a sense of responsibility for their jobs and employers. Lack of diligence and want of enthusiasm is often signaled by such behaviors as tardiness, inappropriate dress and unkempt personal appearance, performing tasks in a perfunctory manner, and no initiative in "going the extra mile" when on the job. **The Council recommends that instruction on work ethics be incorporated into the education process, and that instructors model appropriate work place attitudes, including honesty and integrity.** As students adopt the behavior of a positive work ethic, they should be recognized and praised.

VALUE OF WORK

There is dignity in all work well done. **The Council recommends that all students be taught to recognize the value of doing the job right, whether it be preparing a brief for court or fixing leaky plumbing.** Neither task is to be esteemed above the other, as they both contribute to the functioning of our society. As John Gardner stated,

> "We must learn to honor excellence (indeed, to *demand* it) in every socially accepted human activity, however humble the activity, and to scorn shoddiness, however exalted the activity. An excellent plumber is infinitely more admirable than an incompetent philosopher. The society which scorns excellence in plumbing because plumbing is a[n] humble activity and tolerates shoddiness in philosophy because it is an exalted activity will have neither good plumbing nor good philosophy. Neither its pipes nor its theories will hold water."[1]

[1] Gardner, John W., No Easy Victories, Harper and Row (1968) p. 66.

MASTERY OF BASIC ACADEMIC SKILLS

One industry after another echoes the need for employees to have a solid foundation in basic academic skills, which includes reading comprehension, mathematical computation, and effective writing skills. In addition, the technology of today's workplace demands keyboarding skills, the ability to work as a member of a team, and the ability to use higher-order thinking to reason out solutions to problems. **The Council recommends that all students attain mastery of basic academic skills; those students who elect a vocational or technical path should be required to demonstrate such mastery before entering a vocational or technical program of study.**

APPRENTICESHIP PROGRAMS

Apprenticeship programs are highly successful in Europe as a means of preparing students to enter a chosen vocational field with appreciable skills and knowledge about what is required to perform jobs well. The United States has been hampered in developing apprenticeship programs, in many instances, by Federal labor laws or inflexible school curricula which cannot accommodate change. **The Council recommends that the State Department of Education vigorously pursue the development and implementation of apprenticeship programs.** A draft plan for apprenticeship programs was introduced earlier this year by Dr. John Smiley of the Office of Occupational Education, Alternative Occupational Programs. This plan should be refined further to the point where it is workable and available to students in every school district in the state of South Carolina.

ARTICULATION

The ERA of 1986 mandated that local school boards and local technical college commissions enter into memoranda of agreement for cooperation and coordination. The intent of this requirement was to benefit South Carolina students through ensuring articulation of coursework between the secondary and post secondary institutions. Students would not be "spinning their wheels" satisfying coursework requirements duplicative of those skills already mastered. **The Council recommends that articulation agreements be strengthened and implemented to such a degree that a student's passage from one institution to another will be seamless and without disruption.**

1992 FORUM PARTICIPANTS AND THEIR AFFILIATIONS

Forum Moderator: Mr. Bill Workman, Mayor of Greenville, Greenville, SC.

Mr. Jim Burch, Plant Manager, Sara Lee Hosiery, Marion, SC.

Mr. Ed Comer, Personnel Director, Wachovia Operations Service, Columbia, SC.

Mr. Lee Crawford, Southern Division Marketing Manager, Carolina Power and Light, Florence, SC.

Mr. Furman R. Cullum, President, Cullum Mechanical Construction, North Charleston, SC.

Ms. Shannon Green, Safety and Training Officer, SC Department of Health and Environmental Control, Columbia, SC.

Mr. Ed Griffin, Service Manager, Newsome Chevy World, Columbia, SC.

Dr. Dennard Harris, Vice President for Development, Interstate Management and Investment Corp., Columbia, SC.

Mr. Randy Hunt, Manager SC Plants, Coastal Lumber Company, Walterboro, SC.

Mr. Henry Knight, Manager of Technical Training and Personnel Development, Michelin Tire, Greenville, SC.

Mr. Jonas G. "Pete" Owens, Executive Vice President, BC Moore & Sons, Cheraw, SC.

Mr. Larry Patten, Customer Service Manager, Engelhard Corp., Seneca, SC.

Ms. Donna W. Phillips, Assistant Vice President for In-Service Education, Regional Medical Center, Orangeburg, SC.

Mr. Richard Staughton, Superintendent, Colonial Charters Golf Club, Longs, SC.

Ms. Debbie Truluck, Personnel Manager, McNair Law Firm, Columbia, SC.

Mr. Bruce C. Walters, VP and General Manager, AVM Inc., Marion, SC.

Ms. Anita Wolfe, Personnel Specialist, NCR Corporation, Columbia, SC.

REPORT OF THE FORUM

TOPIC AREA I

The lead topic for the Forum was one which dealt with the issue of availability of vocational education, technical education, and JTPA-funded programs in regard to regular students, handicapped students and special populations. Related questions on the issue of availability dealt with specific training provided by such programs, the adequacy of such training in preparing prospective employees, and the problems encountered by various industries in getting sufficient pools of qualified applicants.

Several of the industries represented at the Forum had common problems and experiences in dealing with workforce preparation issues.

SERVICE INDUSTRIES

In the banking industry, technical programs have supplied one-half of the people hired in the technical and programming-type jobs. There is a strong co-op program with the Lynhaven Center, which provides basic keyboarding and introductory kinds of computer skills. There are also co-op programs with the Urban League and IBM to train disadvantaged workers in basic keyboarding skills. Vocational Rehabilitation supplies handicapped individuals with basic computer programming training, then co-ops with business to place them. If the placement works out for the employer and student, then that individual is offered a job.

The pool of qualified applicants is not always sufficient, so in many instances there is hiring of overqualified people because they are eager to get into banking, and the openings in training programs are limited.

Unlike banking, the construction industry suffers from a poor image. Too many people still associate construction jobs with menial labor or low academic ability. In addition, most workers perceive the industry as a "stop off" on the way to another profession. The observation was made that there are too few vocational programs which do an above-average job training people for entry-level construction. The industry is aware of the need to establish career paths, but more qualified individuals need to invest time and effort in training for the construction trade.

Automotive mechanics, like the construction trades, has a poor image, and recruiting qualified individuals for training is often difficult. The old image of the "shade tree" mechanic is no longer valid, given the high-tech nature of electronic ignition systems and computer-controlled operations of most automobiles being manufactured today. The profession is not perceived as a very glamorous one, and vocational programs throughout the state are struggling to recruit students into the programs. The

state-of-the-art equipment needed to run good programs are big-ticket items, and declining student interest in the vocation makes it difficult to justify the expenditures when education budgets are already stretched to their limits. Those employed as mechanics must have strong diagnostic abilities and be able to read and comprehend increasingly technical shop manuals. Their communication skills must be well-developed, so that they can "talk technical assistance" with factory representatives or anyone else who can help them solve a mechanical problem. In addition, they must continually upgrade their training and skills because of the advancing technology of the industry.

Another field which has difficulty in recruiting qualified personnel for further training is the legal profession. Fortunately, there are a number of good paralegal and legal secretary training programs offered through the technical college system, and personnel administrators report strong satisfaction with the quality of graduates from those programs. Representatives of the legal profession indicate there is a high demand for more technical programs for legal assistants or paralegals. The current applicants generally show a deficiency in basic skills such as grammar, spelling, etc.

For those students interested in the retail business, vocational training is available throughout the state. Along with these programs are varying levels of involvement by local businesses, but most are actively involved in co-op programs or internships. As in a number of other industries, there is often a problem with applicants' lack of basic skills at entry-level positions. In many instances, prospective employees cannot add, subtract, multiply or divide. In the retail business, however, most employers have instituted some type of in-house training program to remediate these skills. When seeking middle or upper level employees, retail businesses recruit from business and fashion merchandising programs at the colleges and universities.

The hotel or hospitality industry has found that many prospective workers lack proficiency in basic skills. Like the retail business, construction, and many other fields, employees need to have a firm foundation in math and communication skills. The ability to work with others and to communicate effectively is of particular value in this field because of the high degree of contact with customers. The hospitality industry is involved in Junior Achievement programs and recruits many employees from that program. In many situations, handicapped individuals are able to fill jobs within this industry, and most of the time higher education credentials are not part of the majority of the job descriptions. Key qualifications needed in this industry are enthusiasm for the job and a willingness to work hard. Too many times an overall negative attitude toward the value of hard work is present, which causes employees to perform duties in a perfunctory manner. The business competition is keen in the hospitality industry, and employers need workers whose positive attitudes and motivation set their establishments apart from others in the minds of customers.

An up and coming profession in South Carolina and throughout the nation is golf course management. This state can boast of having a program of national and international reputation located at Horry-Georgetown Technical College. The course of study specifically prepares students for careers in golf course maintenance and management. The high end of the profession is assistant superintendent or superintendent, and the low end is grounds technicians. Those students who finish this program of study are generally high-caliber, motivated individuals who can land jobs at golf courses anywhere in the United States and abroad. There is a need, however, to have the basics of the profession introduced at the high school level, and completed at the technical college. There are efforts underway to establish a program at Clemson University which would accept the degree in partial fulfillment of the requirements for a four-year university degree in horticulture.

Because of the ever-increasing demand for qualified personnel, the healthcare professions have enjoyed a boom in enrollment. Strong demand for the programs has led to an increase in availability and variety in courses. The nursing programs at Orangeburg-Calhoun Technical College and Midlands Technical College have waiting lists of students eager to be admitted. Throughout the state, other health care programs, such as radiology, respiratory care, and lab technician, are available. There is no shortage of students for entry to these programs; consequently, the competition for available seats is keen and requires that students be above average in their basic studies.

Public utilities in South Carolina need employees with solid communication skills and high levels of commitment or dedication to the job. Entry-level positions are often unattractive to new graduates, because of their unrealistic expectations as to what positions they are qualified to fill. Too many want to skip the entry-level positions and jump straight to middle management or CEO, not recognizing that they lack the level of maturity and experience necessary to perform in those positions. In addition, the technical colleges could better prepare students if industries would communicate to the institutions what technical skills are most needed and valued on the job.

MANUFACTURING INDUSTRIES

A major industry in the state is the lumber/plywood industry, whose workers fall into two categories: forestry and product-technology. Once again, Horry-Georgetown Technical College is a mainstay in providing a strong program in this field. There is a high placement rate for students in the program. Another significant program provider is Orangeburg-Calhoun Technical College, which supplies the product technician or manufacturing people. In spite of these two good programs, many trained people are being lost to other industries because of the low entry-level salaries. In addition, there is still a dependence on training skilled labor at out-of-state sites, such as

Haywood County Technical College in North Carolina and facilities in Memphis, Tennessee.

The high-tech industries, such as computer manufacturing, are experiencing problems similar to those in other industries. Prospective employees in this field need to be able to use math and reading skills proficiently, and a high percentage of applicants cannot do this. A bright spot in this situation is NCR's ability to hire about seventy-five to eighty percent of all Midlands Technical College electronics technician students, draftsmen, and programming technicians.

Manufacturing jobs in general require mechanical and technical skills. In many instances, applicants cannot pass tests administered to assess their understanding of basic mechanical principles. The opinion is that current vocational programs are not geared to the technological industrial experience, but more geared toward service industries. Most machines today are computer operated, so people are not working with their hands as much as with their heads. Keyboarding skills should be a part of everyone's educational experience. There should be more involvement at earlier grade levels to introduce technical fields and the opportunities available which do not require a four-year university degree — too often technician-level slots go unfilled because students are not aware of their existence or prepared with the skills needed to secure the positions.

One of the larger employers in the state, the Michelin Company, generally does not bring in workers from vocational schools who already have the skills needed to perform industrial maintenance work on their mechanical systems. However, the industry does support vocational education programs because they are useful as a conduit for post secondary technical schools which provide candidates for the industry. The basic skills needed are in literacy and technical areas — math, algebra, trigonometry, and basic electronics. In times of rapid growth, special training programs have been set up with Spartanburg Tech, Greenville Tech, and Midlands Tech because sufficient applicants in-state weren't available. In many cases, out-of-state recruiting was necessary. Shoring up the negative perception of vocational education should be a top priority. Even though salary levels are competitive for industrial maintenance mechanics, the status of the job itself ranks low in most peoples' minds.

One very important skill which has not received enough attention in the technical college setting is that of team work. More and more, industries are moving toward the team concept of resolving problems and making decisions. This approach requires that people know about everyone else's job and how all the parts fit together to achieve the whole. This is especially true for the chemical industry, where generally the applicants come from both the general education and technical paths. The industry is competitive pay-wise, so a sufficient applicant pool is not a problem. Applicants should have a mastery of basic skills — literacy, math, interpersonal and communication skills, and critical-thinking ability.

CONSENSUS FINDINGS - TOPIC I

1. Vocational education programs are not as highly regarded by parents and students as are traditional academic programs of study. The public misperception is still that vocational courses are for those "less academically fit" students who cannot succeed in more rigorous academic settings, such as college prep courses.

2. All students should be introduced to career opportunities early in their educational programs. All choices, those requiring four-year degrees and those requiring post secondary training but not necessarily four-year programs should be presented to the student for his/her consideration.

3. Too many students are not getting the solid foundation in the basic skills which is so necessary in order to progress to training at more advanced levels. There should be greater emphasis on basic technology skills, and every student should learn to keyboard.

4. Industry should communicate to educational institutions, the educational administrators, and teachers what technical skills are needed for students to succeed in the workplace.

5. Work values should be taught at an early age.

6. Every student should be trained to work as a team member as well as to exercise independent judgement when making decisions or resolving problems.

TOPIC AREA II

What is the role of business and labor in providing and modernizing vocational education, and in what ways has industry recently helped with planning, support or participation in vocational education programs or technical education programs?

A number of industries reported regular contact with education representatives, both at the secondary and post secondary levels. Many companies involve themselves in meetings with local school boards in forum-type formats to address issues of continuing education. Most industries believe that a partnership effort is the most effective means of improving vocational and technical programs.

School board members and teachers need to get out into the workplace, such as manufacturing plants, in order to see and learn first-hand what jobs are out there and what skills are used in performing the jobs. Industry does encourage teachers from the elementary, secondary, and post secondary levels to tour facilities and even come to work for them during the summer.

Education foundations consisting of members from industry and education have been formed to provide feedback to institutions concerning what programs or curriculums should be offered. This exchange allows those involved in planning and implementing education programs to better understand the "real-world" work environment and what adjustments need to be made to existing programs. One public utility company has a pilot program which employs teachers during the summer, exposing them to the actual workplace where their students' skills will be applied.

Advisory committees are another way for industry to communicate with education leaders about the quality of programs and to help create programs better suited to students' needs. One of these, cooperative education, or co-op, enables students to work and attend classes; a number of co-op programs even contribute the cost of the students' books and tuition. In many instances, industry can hire high school or tech college instructors to teach special classes on-site. This practice familiarizes the instructor with industry standards and what skills are essential in performing jobs within that particular industry.

The Junior Achievement Program has been an excellent resource of promising talent for the hospitality industry. Students involved in the program learn the value of basic business skills — understanding a balance sheet, keeping costs in line, and making a profit. The retail business also makes use of programs like Junior Achievement, and actively pursues schools to cooperate in distributive education programs. In many instances retail businesses supply some financial assistance, materials, equipment, merchandise, fixtures, and cash registers so that students can be properly trained in a hands-on environment.

Many industry representatives at the Forum remarked on the need for employees who had the motivation to continue learning, either at post secondary institutions or in-house skill training workshops. All industries promote education for their employees, and their endorsement of this can be seen by their participation in Adopt-A-School programs and donations of resources and technical support services to schools within their respective communities. Industries participate in speakers bureaus and career days; many have a designated educational coordinator who stays in contact with guidance counselors and looks for ways to cooperate in efforts to improve vocational and technical programs.

The legal profession supports education programs by offering financial assistance to interns in the legal assistant program at Midlands Technical College. Very often local attorneys serve as instructors in the program at Midlands Tech, and senior-level paralegals serve on the Curriculum Advisory Board. Still, there is a need for the institution to approach the legal profession about how the programs can be better structured to serve the needs of the profession and better train those coming into the profession. Employment Security Commission statistics project a continued need for skilled legal assistants/secretaries. Given the strong demand in the marketplace and the excellent salary and career opportunities available, the technical schools need to step up recruiting of legal secretary candidates.

A few industry representatives reported that they have surveyed high schools within their areas about starting up co-op programs but there was little or no interest. Schools should always follow up on such inquiries and seize every opportunity of involving the community in the education process.

CONSENSUS FINDINGS - TOPIC II

1. All school districts should establish partnerships with local business and industry, seeking out and actively involving those groups in planning for the educational needs of their students.

Regular contact between the two groups will ensure that schools will be aware of what job skills are needed by employers.

3. Educators need to get out into the workplace to see first-hand what job opportunities are available and what skills are needed to succeed at those jobs. Industries with summer employment programs for teachers should expand them, and those industries without such programs should investigate whether or not such a program could be implemented within their work environments.

4. Industry should continue to support co-op programs, Junior Achievement Programs, the Adopt-A-School Programs, and other efforts which better train students to be successful in their chosen careers.

5. Industry should continue to offer financial incentives or assistance, such as loans and tuition reimbursement, to those workers who want to continue their education or upgrade their skills.

6. Industry can encourage employees, at all levels, to be involved in advisory committees, school career days, and speakers bureaus.

7. Too many employees and students lack a strong work ethic and a commitment to the job. Educators, industry representatives, and parents need to address this issue together in order to come up with ways of instilling better attitudes and developing improved workplace habits in students.

8. Serious public relations work needs to be done to improve the image of vocational and technical education. Blue collar positions are less valued in the minds of students and the general public than are white-collar professions.

What is the level of coordination in planning and providing vocational education, technical education, and JTPA-funded programs? Is there successful program articulation between secondary vocational education, technical education, JTPA-funded programs, and four-year college programs?

One perception of coordination of programs is that the vocational education system is like a satellite to regular academic programs in K through 12th grade, and hasn't been made an integral part of academic preparation.

A second observation is that there is no one place to go to find out about JTPA programs — different program components are located in different places. To centrally locate the program seems more efficient from a communications standpoint.

Another opinion expressed was that there should be an industry liaison connected with each school. The perception is that guidance counselors in high school are pushing only university education, which sends the wrong message about the worth of vocational education as a career path.

In addressing articulation issues, the remark was made that the articulation agreements in place throughout the state should provide a platform for cooperation but are not always as workable as they appear on paper. Many industry representatives expressed the idea that coordination and cooperation is sometimes hindered by reluctance or resistance to change systems that have become familiar and comfortable. There are still too many instances of students having to go out of state to have their credits transferred to four-year programs of study because in-state institutions would not accept their coursework for degree credit. The competition for students which exists between the two-year and four-year institutions creates a barrier to effective implementation of articulation agreements.

Some industry representatives reported articulation was working well in selected instances. For example, students in the Golf Course Management Program at Horry-Georgetown Technical College will soon be able to transfer their credits to Clemson University to complete a degree in Horticulture. Others stated that technical colleges appear to be moving toward liberal arts preparation rather than technical training — there needs to be more emphasis on keeping technical training in the two-year colleges.

CONSENSUS FINDINGS — TOPICS III & IV

1. Vocational education should be more fully integrated in the academic process and become an integral part of academic preparation.

2. There is no one central place to go or call to find out about JTPA programs — different program components are located in different places. In order to more effectively help those needing information about JTPA programs, there should be a single point of contact.

3. Each school should have an industry liaison person who communicates industry's expectations of students preparing to enter the workforce.

4. Articulation agreements should be implemented to the point where South Carolina does not lose a single student to an out-of-state institution because of an inability to transfer coursework credits from in-state secondary and post secondary institutions. Two-year and four-year institutions must strive to eliminate any spirit of competition, because students are the ones who ultimately pay the price for any lack of cooperation in the area of articulation.

5. Tech Prep programs can successfully prepare students for the challenges of a technology-oriented workplace. Technical colleges must maintain their role in providing the technical and specialized training so vital to achieving a competitive workforce.

What are the most critical personnel needs, considering either job categories or individual employee competencies and skills, and what will the addition of tech prep programs do for secondary vocational education and/or technical colleges as they work to better meet the needs of industry? Are there in-house training programs you offer that could be provided by the tech college or the vocational education system, and what types of new technologies could impact on employees and the need for training?

RETAIL

There is an urgent need for a much better trained individual from the standpoint of technology of equipment. In addition, communication skills, both written and verbal, enhance competent technical knowledge. People still work with people, and the ability to communicate ideas is still a vital necessity for the workplace. And it doesn't hurt for employees in the public eye to demonstrate a little enthusiasm for the job and for serving the customer. So much of industry relies on the goodwill of the customer, and it is important to have that customer feeling that he wants to do business with you again. Competent, enthusiastic employees go a long way toward insuring that new business will find you and much of your business will be repeat. No tech program offers a course specifically in enthusiasm or work ethics, but there are important lessons about being an employee and doing a job well that should be taught to students. Students must make the connection in their minds that quality job performance equals job satisfaction and employment security, in most instances. They need to see that doing it better than anyone else does pay a dividend to them and to the company employing them.

MANUFACTURING

The technology pace for industry is a rapid one, and people need the ability to adapt to change and to learn new ways and processes to accomplish a task. Most of all, they need an attitude of acceptance of change and a willingness to receive and apply new information. In today's manufacturing environment, people are being asked to be members of problem-solving teams. To do that, they must have a basic foundation in technology and be able to work cooperatively with others. Workers are now expected to resolve, through the group process, situations which were once handled only on the managerial level. Tech prep programs which place an emphasis on the basics of science principles, electronics, mathematics, and communications in the workplace will better equip students to function in a high-tech manufacturing environment. Part of that will include the ability to move from job to job, doing all jobs on the manufacturing floor, rather than just performing one isolated task.

BANKING AND PUBLIC UTILITIES

The banking industry has embraced the concept of interactive management, a team building approach which addresses how to manage change. The program is directed at managers — how to work with people through the change process. Like banking, the public utility industry has recognized the need for teaching employees how to function as teams within an organization. One problem often identified in prospective employees is their lack of any clear cut employment goals — either short or long term. Too many times applicants do not know what they want to do, what talents they have, what they enjoy doing, and what training they have or wish to receive to be able to meet those employment goals. Students need to become more self-directed in mapping out a plan for their careers and seek the educational preparation which will aid them in attaining their goals.

CONSENSUS FINDINGS - TOPIC AREAS V & VI

1. The general opinion expressed by members of the Forum panel was that tech prep promises to bring about positive changes in the manner in which students are prepared for further education or for the workplace.

2. New employees generally do not have the work ethics desired by most employers in the state, nor do they have a sense of direction about their career goals.

3. Employees must be trainable at all points in their careers — technology is changing rapidly and the workforce must keep pace with the changes.

THE PURPOSE OF THE STATE COUNCIL

The State Council on Vocational and Technical Education is required as one of the essential conditions for the state to receive federal funds for vocational education. The Council meets the requirements specified in Sec. 112 and related parts of the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 (P.L. 101-392).

The Council also is the State Occupational Training Advisory Committee (SOTAC) established by the Employment Revitalization Act of 1986. As the SOTAC, the Council has several responsibilities, including one to evaluate and report on the coordination and cooperation between vocational education, technical education, and the JTPA programs.

Recommendations on policy matters supported by research and evaluation are provided primarily to the State Board for Vocational Education, which by state law is the State Board of Education, and to the State Board for Technical and Comprehensive Education. Reports, with recommendations, are produced and distributed to the Governor, General Assembly, State Board of Education, State Board for Technical and Comprehensive Education, the administration for the JTPA programs, other groups, and to the public.

The Council conducts approximately eight meetings during the year. The Council has five special committees on which council members may serve. These are the Executive, Articulation, Business and Industry Forum, Federal Requirements, and Site Visit Committees. The Executive Committee provides overall direction for the Council; and the Committee establishes the schedule of meetings, determines the agenda, and acts on behalf of the Council during periods between full Council meetings.

COUNCIL OFFICERS — COMMITTEE

At the time of the Forum, Mr. Larry Patrick of Bowman, S.C., was the Council Chairman. Other officers were:
Mr. Frank M. Hart, Vice Chairman
Mrs. Deanne Jolly
Mr. Lonnie Rowell

Since that time, Mr. Lonnie Rowell has been elected Council Chairman for 1992-1993. Mr. James Tanner replaced Mrs. Deanne Jolly, and joins Mr. Frank M. Hart and Mr. Larry Patrick as officers for 1992-93.

The planning and conduct of the 1992 Forum was under the direction of a Business-Industry Forum Committee composed of:

Mr. Lonnie Rowell, Committee Chair
Mr. Frank M. Hart
Mr. John Mahon
Mr. Larry Patrick
Mrs. Judith Warner

STATE COUNCIL MEMBERSHIP

Members of the State Council are appointed by the Governor for three-year terms to meet certain membership categories specified in the Carl D. Perkins Vocational and Applied Technology Education Act.

Mr. Lamar Brabham is a member of the State Job Training Coordinating Council appointed by the Governor under provisions of JTPA and is past Chairman of the Richland Private Industry Council.

Mrs. Shirley Corbett is the Tech-Prep Coordinator at Florence-Darlington Technical College and is a certified counselor.

Mr. Gregory Guess is Vice President of Custom Sign and Identification located in Aiken, South Carolina, and is a member of the National Federation of Independent Businessmen.

Mr. Frank M. Hart has been an active member since 1978. Mr. Hart has served as Chairman and currently is Vice-Chairman of the Council. He retired from the position of Superintendent of Marion School District Number 1. Mr. Hart is serving as Vice President of the National Association of State Councils on Vocational Education for 1992-1993.

Ms. Deanne Jolly is employed by Southern Bell. She served as a member of the Council's Executive Committee during 1990-1991 and 1991-1992.

Mr. Frank Lanford is Director of the Fred P. Hamilton Career Center in the Oconee School District.

Mr. John A. Mahon is Vice President of INA Bearing Company, Inc., a major manufacturing firm located in Cheraw.

Mr. Larry Patrick was the Chairman of the Council during 1991-1992. He served on the Council from 1977 to 1983 and was appointed again in 1988 and has served since 1988. He is the owner of Cow Castle Farms, Inc., a dairy operation in Bowman.

Mr. Lonnie Rowell is the Chairman of the State Council for 1992-1993. He is general manager and owner of Pyramid Enterprises, and is past president of the local chapters of the Society of Manufacturing Engineers and the Institute of Industrial Engineers.

Mrs. Eunice Spilliards is a Vocational Special Needs Coordinator for the Beaufort-Jasper Career Education Center at Ridgeland and is active in the SC Special Needs Association.

Mr. James W. Tanner, Jr. is retired Dean of Student Services for Williamsburg Technical College and an evaluator for the Southern Association of Colleges and Schools (SACS). Mr. Tanner was elected to the Council's Executive Committee for 1992-1993.

Mrs. Judith V. Warner is the owner of the Vegetable Bin Produce and Greenhouses in Wagener and is a licensed seedman and nurseryman.

Dr. P.T. Williams is Professor of English at Morris College, and has served as Special Assistant to the Secretary of Education, U.S. Dept. of Education.

GLOSSARY

1. ADULT EDUCATION also known as LIFE-LONG LEARNING: "... educational opportunities for adults ... that will: 1.) enable all adults to acquire basic skills necessary to function in society, 2.) enable all adults who so desire to continue their education to at least the level of completion of secondary school, and 3.) make available to adults the means to secure training that will enable them to become more employable, productive, and responsible citizens."
(The Adult Education Act, PL 91-230)
May be categorized into four types:

LITERACY: teaching basic reading — often using a "one-on-one" approach.

BASIC ADULT EDUCATION: classes designed to overcome deficiencies in certain areas, such as reading, math, or writing and usually at a level below secondary.

GED: preparation for a test of equivalency of high school graduation.

DIPLOMA: enrollment in an adult program to earn a high school diploma from an accredited high school.

2. ADULT VOCATIONAL EDUCATION: Program, or programs, designed to provide entry-level or upgrading skills to adults, frequently offered by school districts in high schools or Area Vocational Centers or at the Technical Colleges.

3. AREA VOCATIONAL EDUCATION SCHOOL: A school which serves a geographic area as a deliverer of vocational education including: (a) vocational high school; (b) a high school department offering study in at least five occupational areas; (c) a technical or vocational school for students who have completed high school; or (d) a junior or community college department with at least five occupational areas of study. An area school (center) may serve secondary students from one or from several school districts.

These are also known as AREA VOCATIONAL TECHNICAL SCHOOLS, CAREER CENTERS, CAREER DEVELOPMENT CENTERS, or other but similar names.

4. CAREER EDUCATION: "...is the total effort by which educational agencies and communities present organized career-oriented activities and experiences to all persons from nursery school through adulthood, and orients the entire educational plan into one, unified, career-based system." (Illinois State Board of Education, 1980)

5. COMPETENCY-BASED VOCATIONAL EDUCATION: An instructional system based on occupational analysis and clearly stated performance objectives that lead to the development of competencies - knowledge, skills, and attitudes - that are deemed critical to successful employment. Successful completion is based on mastery of competencies rather than on clock-hours of participation. (Pennsylvania Council on Vocational Education, 1985)

6. CORRECTIONAL INSTITUTION: This means any prison, jail, reformatory, work form, detention center, or halfway house, community-based center or any other similar institution designed for the confinement or rehabilitation of criminal offenders. (Carl Perkins Vocational and Applied Technology Education Act of 1990 - PL 101-392).

7. CONTINUING EDUCATION: Any educational programs extension for youth and adults of opportunities for reading, study and training at the higher education level following completion of or withdrawal from full-time educational programs. Usually emphasizes flexible programs.

8. COMPREHENSIVE HIGH SCHOOL: A secondary school with a curriculum designed to offer a diversified program to meet the needs of pupils with varying interests and abilities; typically offering vocational education programs, and advanced or college prep programs.

9. COOPERATIVE EDUCATION (CO-OP): A method of instruction of vocational education for individuals who, through written cooperative arrangements between the school and employers, receive instruction, including required academic courses and related vocational instruction by alternation of study in school with a job in any occupational field. Such alternations shall be planned and supervised by the school and employers so that each contributes to the student's education and to his or her employability. Work periods and school attendance may be on alternate half days, full days, weeks, or other periods of time in fulfilling the cooperative program. (Carl Perkins Vocational and Applied Technology Education Act of 1990 - PL 101-392).

10. DISADVANTAGED: Persons (other than physically or mentally handicapped) with academic or economic disadvantages who require special services and assistance in order to succeed in vocational education programs. Includes persons from economically disadvantaged families, migrants, limited-English speaking proficiency, dropouts, and potential dropouts.

11. DISPLACED WORKER: An individual who is unemployed because of a plant closing, a business closing, or his/her inability to keep pace with changing technology.

12. ECONOMICALLY DEPRESSED AREA: An economically integrated area within the state having a chronically low level of economic activity or a deteriorating economic base which causes unemployment to exceed by 50% or more the average unemployment of the state.

13. ECONOMICALLY DISADVANTAGED: This means any family or individual who are determined by the U.S. Secretary of Education to be low-income according to the latest available data form the U.S. Department of Commerce. (Carl Perkins Vocational and Applied Technology Education Act of 1990 - PL 101-392)

14. HANDICAPPED: Persons who are mentally retarded, hard of hearing, deaf, speech-impaired, visually handicapped, seriously emotionally disturbed, crippled, or otherwise impaired in terms of health, who therefore require special education and related services and who cannot succeed in regular vocational education programs without special assistance or who require a modified vocational education program.

15. HIGH TECHNOLOGY: The term 'high technology' means state-of-the-art computer, microelectronic, hydraulic, pneumatic laser nuclear, chemical, telecommunication, and other technologies being used to enhance productivity in manufacturing, communication, transportation, agriculture, mining, energy, commercial, and similar economic activity, and to improve the provision of health care. (Carl Perkins Vocational and Applied Technology Education Act of 1990 - PL 101-392)

16. LOCAL DIRECTOR OF VOCATIONAL EDUCATION: An educational administrator charged by the local Board of Education with the responsibility for developing, planning, implementing and supervising vocational education in a local school system.

17. ON-THE-JOB TRAINING: Instruction in the performance of a sequentially-planned job given to an employee by the employer during the usual working hours of the occupation. Usually the minimum or entry-level wage is paid.

18. PRE-EMPLOYMENT TRAINING: Instruction and practices in the skills and principles of an occupation or payroll job given to persons before placement on a job. Instruction may be a formal course or curriculum, or it may be a short, intensive program of orientation and instruction immediately prior to employment.

19. PRIVATE VOCATIONAL TRAINING INSTITUTION: A for-profit business or trade school, technical institution, or other technical vocational school which admits students who have left or completed school and prepares them with skills for employment.

20. SMALL BUSINESS: The term 'small business' means for-profit enterprises employing 500 or fewer employees. (Carl Perkins Vocational and Applied Technology Education Act of 1990 - PL 101-392)

21. T&I: Trade and Industrial Education - instruction related to a diverse group of occupational areas, usually provided in grades 11 and 12, including programs such as auto mechanics, masonry, machine shop, etc. A type of program under vocational education.

Instruction planned to develop basic manipulative skills, safety practices, judgment, technical knowledge, and related occupational information for the purpose of fitting persons for initial employment in industrial occupations or upgrading and retraining workers employed in industry. (Pennsylvania Council on Vocational Education, 1985)

22. TECH PREP: Tech Prep Education is a program of study designed to provide competencies needed for the technological workplace and preparation for students to pursue higher education. The program of study provides for an articulated secondary and post secondary curriculum integrating academic and occupational education. The objective is to provide a sequential program of study which will enable students to earn an associate degree. (Office of Occupational Education, paper dated February, 1992)

23. TECHNICAL EDUCATION: "...instruction and training in occupations above the craftworker or trade levels, but generally not professional in nature ...[Instruction is designed to] qualify persons for employment in paraprofessional positions and as technicians, engineering aides, and production specialists." (American Vocational Association)

In South Carolina, the term is usually used to designate the institutions and program offerings provided under the auspices of the State Board for Technical and Comprehensive Education. The programs are usually located at or administered by one of the sixteen Technical Colleges.

24. TECHNOLOGY EDUCATION: The term means "an applied discipline designed to promote technological literacy which provides knowledge and understanding of the impacts of technology including its organizations, techniques, tools and skills to solve practical problems and extend human capabilities in areas such as construction, manufacturing, communication, transportation, power and energy." (Carl Perkins Vocational and Applied Technology Education Act of 1990 - PL 101-392)

25. UNEMPLOYED: A person who is not employed in the labor force, but is actively seeking employment.

26. UNDEREMPLOYED: A person who is working in a position that pays less than that person's ability should command, and is not fully utilizing their human resources.

27. VOCATIONAL EDUCATION: The term means "organized education programs offering a sequence of courses which are directly related to the preparation of individuals in paid or unpaid employment in current or emerging occupations requiring other than a baccalaureate or advanced degree. Such programs shall include competency-based applied learning which contributes to an individual's academic knowledge, higher-order reasoning, and problem-solving skills, work attitudes, general employability skills, and the occupational-specific skills necessary for economic independence as a productive and contributing member of society. Such term also includes applied technology education." (Carl Perkins Vocational and Applied Technology Education Act of 1990 - PL 101-392)

In South Carolina, the term is often used to designate secondary level programs offered in high schools or vocational education centers identified as vocational programs. Vocational Education typically includes the secondary education programs under the sub-categories of agricultural education, office education, distributive education, health occupations education, home economics education, and trade and industrial education.

28. WORK EXPERIENCE EDUCATION: Employment undertaken as part of the requirements of a school course that is designed to provide planned experiences in a chosen occupation, which is supervised by both a teacher-coordinator and the employer. (Carl Perkins Vocational and Applied Technology Education Act of 1990 - PL 101-392).

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